CLAIMS:

1. Silicon nitride mould parts, particularly crucibles for use in connection with directional solidification and pulling of silicon single crystals, characterized in that the mould parts consist of Si_3N_4 having a total open porosity between 40 and 60% by volume and where more than 50% of the pores in the surface of the mould parts have a size which is larger than the means size of the Si_3N_4 particles.

2. Mould parts according to claim 1, characterized in that the mould parts are coated with silicon nitride particles having an average particle size of less then 50µm.

3. Method for the production of silicon nitride mould parts, particularly crucibles for use in connection with directional solidification of silicon, where particulate silicon having a particle size of less than 100µm is formed to a mould part and subjected to nitridation for conversion of the silicon particles to Si_3N_4, characterized in that the forming is carried out under such a pressure and with such a particle size distribution of the silicon particles that the finished silicon nitride mould part has an open porosity between 40 and 60% by volume and where more than 50% of the pores in the surface of the finished mould part are greater than the mean size of the Si_3N_4 particles.

4. Method according to claim 3, characterized in that the shaping of the mould parts from the silicon particles is carried out at a pressure of below 200 Mpa.

5. Method according to claim 3, characterized in that the shaping of the mould parts are carried out using vibration.